

Notice of Allowability

Application No.

10/673,236

Applicant(s)

MIMOTOI, SHOJI

Examiner

Alexander J. Kosowski

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed 9/30/03.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ The drawings filed on 30 September 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 9/30/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

pd

DETAILED ACTION

- 1) Claims 1-14 are presented for examination.

IDS

- 2) The IDS filed 9/30/03 has been considered.

Allowable Subject Matter

- 3) Claims 1-14 are allowed.

The following is an examiner's statement of reasons for allowance:

Referring to claims 1 and 5, the closest prior art of record is Taoka et al (U.S. Pat 6,760,892) and Komatsu et al (U.S. Pat 6,610,460). Taoka teaches an apparatus for evaluating lithography process margins comprising a simulation apparatus which forms patterns on a substrate and allows values of focus and exposure to be adjusted. Komatsu teaches an exposure method to test patterns projected on substrates which utilizes ED-trees in a simulation to determine focus and exposure settings. However, Taoko and Komatsu, alone or in combination with each other or the prior art of record, do not explicitly teach a computer-implemented method for evaluating a process margin and setting up a measurement condition of a process margin comprising calculating a plurality of ED-trees and calculating a plurality of margin curves based on pseudo measured dimensions with respect to combinations of setting values and calculating a dispersion of a tolerance of light exposure of margin curves at a depth of focus corresponding to a maximum difference in height of a substrate, in combination with the remaining elements or features of the claimed invention.

Referring to claims 8 and 12, the claims vary from claims 1 and 5 only in that they claim a computer program product rather than a computer-implemented method. The method taught in

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claims 1 and 5 is capable of being implemented as a computer program, and therefore claims 8 and 12 are allowable for the same reasons as claims 1 and 5.

Referring to claims 2-4, 6-7, 9-11 and 13-14, the claims are dependent on allowable claims, and are therefore also allowable.

4) Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5) The Examiner has added several other pieces of related prior art to the record. These have been noted on the attached PTO-892.

6) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander J Kosowski whose telephone number is 571-272-3744. The examiner can normally be reached on Monday through Friday, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. In addition, the examiner's RightFAX number is 571-273-3744.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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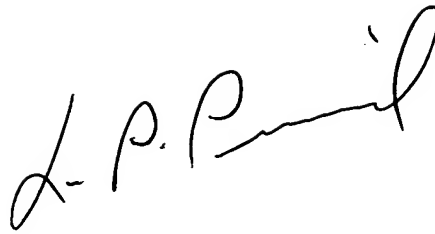
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Alexander J. Kosowski

Patent Examiner

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A handwritten signature in black ink, appearing to read "L. P. Picard". The signature is written in a cursive, flowing style.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100